

The invention claimed is:

 A method of creating a personal Web view com 	mprising	comprising
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creating a plurality of Web clippings, the personal view comprising a plurality of Web clippings, each Web clipping containing information from an associated one of a corresponding plurality of Web pages, each Web page being selected by a user from essentially any accessible Web page on any Web server, each of the plurality of Web clippings being created by:

generating an access script to automatically retrieve the Web page associated with the Web clipping;

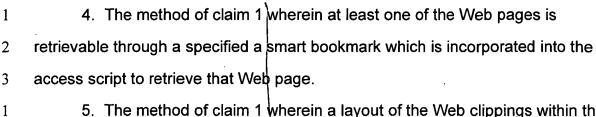
generating an extraction expression to extract one or more userselected information elements from the Web page associated with the Web clipping; and

incorporating the access script and the extraction expression into a specification of the associated Web clipping;

incorporating the specification of each Web clipping into a specification of the Web view; and

storing the specification of the Web view, wherein when the stored specification of the Web view is replayed and active, the plurality of Web pages are automatically retrieved and the selected one or more information elements from each Web page are extracted and incorporated into each associated Web clipping and the plurality of Web clippings are combined for display in a browser.

- 2. The method of claim 1 wherein at least one of the Web pages is directly retrievable through a specified URL which is incorporated into the access script to retrieve that Web page.
- 3. The method of claim 1 wherein at least one of Web pages is retrievable through a specified site description which is incorporated into the access script to retrieve that Web page.



- 5. The method of claim 1 wherein a layout of the Web clippings within the personal Web view is incorporated in the specification of the Web view.
- 6. The method of claim 1 wherein the extraction expression generated for one or more of the Web clippings domprises a DOM address of one or more information elements extracted from the retrieved one Web page associated with the one Web clipping.
- 7. The method of claim 1 whekein the extraction expression generated for one or more of the Web clippings comprises an XPATH expression of one or more information elements extracted from the retrieved one Web page associated with the one Web clipping.
- 8. The method of claim 1 wherein the extraction expression generated for one or more of the Web clippings includes redundancy to insure that when the Web view is replayed the one or more information elements extracted from the retrieved one Web page associated with the one Web clipping are the actual user-selected information elements.
- 9. The method of claim 8 wherein the redundancy comprises at least one string associated with one or more information elements extracted from the retrieved one Web page associated with the one Web clipping.
 - 10. A method of displaying a personal Web view comprising:
- accessing a specification of the personal Web view, the Web view comprising a plurality of Web clippings, each Web\clipping containing information from an associated one of a corresponding plurality of Web pages that have been individually selected by a user from essentially any accessible Web page

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on any Web server, the s	pecification of the personal Web view containing a
specification for each of t	ne plurality of Web clippings;

automatically retrieving the Web page associated with each Web clipping in accordance with an access script for retrieving that Web page that is associated with the specification of the Web clipping;

extracting one or more user-selected information elements from each Web page in accordance with an extraction expression in the specification of each associated Web clipping to create a displayable Web clipping containing those elements, the extraction expression associated with each Web clipping indicating the one or more user-selected information elements from the associated Web page to be included in the Web clipping; and

combining and displaying in a browser the plurality of Web clippings containing the extracted information elements from the plurality of associated retrieved Web pages.

- 11. The method of claim 10 wherein the access script for at least one of the Web pages directly retrieves the Web page through a specified URL.
- 12. The method of claim 10 wherein the access script for at least one of the Web pages retrieves the Web page through a specified site description.
- 13. The method of claim 10 wherein the access script for at least one of the Web pages retrieves the Web page through a specified smart bookmark.
- 14. The method of claim 10 wherein the Web clippings are displayed in the Web view in the browser in accordance with a layout specified in the specification of the Web view.
- 15. The method of claim 10 wherein the extraction expression in one or more of the Web clippings comprises a DOM address of one or more userselected information elements to be extracted from the one Web page associated with the one Web clipping.

1	10. The method of claim
2	more of the Web clippings com
3	selected information elements t
4	associated with the one Web cl
1	17. The method of claim
2	more of the Web clippings inclu
3	the Web view the one or more
7	page associated with the one V
/ 5	information elements.
1	18. The method of claim
2	one string associated with one
3	retrieved one Web page associ
1	19. Apparatus for creati
2	means for creating each
3	view comprising a plurality of W

The method of claim 10 wherein the extraction expression in one or drises an XPATH expression of one or more userobe extracted from the one Web page lipþing.

- n 18 wherein the extraction expression in one or des redundancy to insure that when displaying information elements extracted from the one Web Veb clipping are the actual user-selected
- n 17 wherein the redundancy comprises at least or more information elements extracted from the ated with the one Web clipping.
 - ng a persohal Web view comprising:

of a plurality of Web clippings, the personal Web leb clippings,\each Web clipping containing information from an associated one of a plurality of Web pages, each Web page being selected by a user from essentially any accessible Web page on any Web server, said means for creating comprising:

means for generating an individual access script to automatically retrieve each Web page associated with each Web clipping;

means for generating an individual extraction expression to extract one or more user-selected information elements from each Web page associated with each Web clipping; and

means for incorporating the individual access script and extraction expression for each Web clipping into a specification of the Web clipping; means for incorporating the specifications of each of the Web clippings into a specification of the Web view; and

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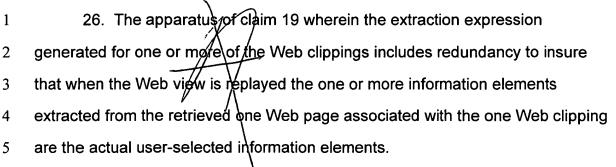
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means for storing the specification of the Web view, wherein when the stored specification of the Web view is replayed and active, the plurality of Web pages are automatically retrieved and the user-selected one or more information elements from each Web page are extracted and incorporated into each associated Web clipping and the plurality of Web clippings are combined for display in a browser.

- 20. The apparatus of claim 19 wherein at least one of the Web pages is directly retrievable through a specified URL which is incorporated into the access script to retrieve that Web page.
- 21. The apparatus of claim 19 wherein at least one of the Web pages is directly retrievable through a specified site description which is incorporated into the access script to retrieve that page.
- 22. The apparatus of claim 19 wherein at least one of the Web pages is directly retrievable through a specified smart bookmark which is incorporated into the script to retrieve that page.
- 23. The apparatus of claim 19 wherein a layout of the plurality of Web clippings within the personal Web view is incorporated in the specification of the Web view.
- 24. The apparatus of claim 19 wherein the extraction expression in one or more of the Web clippings comprises a DOM address of one or more user-selected information elements extracted from the one Web page associated with the one Web clipping.
- 25. The apparatus of claim 19 wherein the extraction expression in one or more of the Web clippings comprises an XPATH expression of one or more user-selected information elements extracted from the one Web page associated with the one Web clipping.



- 27. The apparatus of claim 26 wherein the redundancy comprises at least one string associated with one or more information elements extracted from the retrieved one Web page associated with the one Web clipping.
- 28. Apparatus for displaying a personal Web view comprising a plurality of Web clippings, each Web clipping containing information from an associated one of a plurality of Web pages, the apparatus comprising:

means for accessing a specification of the personal Web view, the Web view comprising a plurality of Web clippings, each Web clipping containing information from an associated one of a corresponding plurality of Web pages that have been individually selected by a user from essentially any accessible Web page on any Web server, the specification of the personal view containing a specification for each of the plurality of Web clippings;

means for automatically retrieving the Web page associated with each Web clipping in accordance with an access script for retrieving that Web page that is associated with the specification of the Web clipping;

means for extracting one or more user-selected information elements in each Web page in accordance with an extraction expression in the specification of each associated Web clipping to create a displayable Web clipping containing those elements; and

means for combining and displaying in a browser the plurality of Web clippings containing the extracted information elements from the plurality of associated retrieved Web pages.



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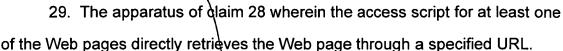
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- 30. The apparatus of claim 28 wherein the access script for at least one of the Web pages retrieves the Web page through a specified site description.
- 31. The apparatus of claim 28 wherein the access script for at least one of the Web pages retrieves the Web page through a specified smart bookmark.
- 32. The apparatus of claim 28 wherein the plurality of Web clippings are displayed in the Web view in the browser in accordance with a layout specified in the specification of the Web view.
- 33. The apparatus of claim 28 wherein the extraction expression in one or more of the Web clippings comprises a DOM address of one or more userselected information elements extracted from the one Web page associated with the one Web clipping.
- 34. The apparatus of claim 28 wherein the extraction expression in one or more of the Web clippings comprises an XPATH expression of one or more userselected information elements extracted from the one Web page associated with the one Web clipping.
- 35. The apparatus of claim 28 wherein the extraction expression in one or more of the Web clippings includes redundancy to insure that when the Web view is displayed the one or more information elements extracted from the retrieved one Web page associated with the one Web clipping are the actual user-selected information elements.
- 36. The apparatus of claim 35 wherein the redundancy comprises at least one string associated with one or more information elements to be extracted from the retrieved one Web page associated with the one Web clipping.
- 37. A memory for storing a specification of a personal Web view for execution on a browser comprising:



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3	a data structure stored in the memory, said data structure including
4	information for automatically retrieving a plurality of predefined Web pages that
5	have been selected by a user from essentially any accessible Web page on any
6	Web server, information for extracting user-selected information content from the
7	plurality of Web pages, and information for displaying the extracted information
8	content from the plurality of Web pages together as the Web view in the browser

- 38. The memory of claim\37 wherein the information for retrieving at least one of the Web pages comprises a specified URL.
- 39. The memory of claim 37 wherein the information for retrieving at least one of the Web pages comprises a specified site description.
- 40. The memory of claim 37 wherein the information for retrieving at least one of the Web pages comprises a specified smart bookmark.
- 41. The memory of claim 37 wherein the data structure further comprises information for displaying the information content from the plurality of Web pages in a the browser in accordance with a specified layout.
- 42. The memory of claim 37 wherein the information for extracting user-selected information content comprises one or more DOM addresses of the user-selected information content from one or more of the plurality of pages.
- 43. The memory of claim 37 wherein the information for extracting user-selected information content comprises one or more XPATH expressions of the user-selected information content from one or more of the plurality of pages.
- 44. The memory of claim 37 wherein the information for extracting user-selected information content includes redundancy information for insuring that when the Web view is replayed the extracted information content is the actual information content selected by the user.

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45. The memory of claim 44 wherein the redundancy information
comprises at least one string associated with at least some of the user-selected
information content from at least some of the plurality of Web pages.

46. A computer readable media tangibly embodying a program of instructions executable by a computer to perform a method for creating a personal Web view, the method comprising:

creating a plurality of Web clippings, the personal view comprising a plurality of Web clippings, each Web clipping containing information from an associated one of a corresponding plurality of Web pages, each Web page being selected by a user from essentially any accessible Web page on any Web server, each of the plurality of Web clippings being created by:

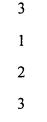
generating an access script to automatically retrieve the Web page associated with the Web clipping;

generating an extraction expression to extract one or more userselected information elements from the Web page associated with the Web clipping; and

incorporating the access script and the extraction expression into a specification of the associated Web clipping;

incorporating the specification of each Web clipping into a specification of the Web view; and

storing the specification of the Web view, wherein when the stored specification of the Web view is replayed and active, the plurality of Web pages are automatically retrieved and the selected one or more information elements from each Web page are extracted and incorporated into each associated Web clipping and the plurality of Web clippings are combined for display in a browser.



47. The media of	claim 46 wherein in the method at least one of the Web
pages is directly retrieval	le through a specified URL which is incorporated into
the access script to retrie	eve that Web page.

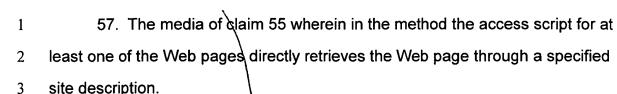
- 48. The media of claim 46 wherein in the method at least one of specified Web pages is retrievable through a specified site description which is incorporated into the access script to retrieve that Web page.
- 49. The media of claim 46 wherein in the method at least one of the Web pages is retrievable through a specified a smart bookmark which is incorporated into the access script to access that Web page.
- 50. The media of claim 46 wherein in the method a layout of the plurality of Web clippings within the personal Web view is incorporated in the specification of the Web view.
- 51. The media of claim 46 wherein in the method the extraction expression generated for one or more of the Web clippings comprises a DOM address of one or more information elements extracted from the retrieved one Web page associated with the one Web clipping.
- 52. The media of claim 46 wherein in the method the extraction expression generated for one or more of the Web clippings comprises an XPATH expression of one or more information elements extracted from the retrieved one Web page associated with the one Web clipping.
- 53. The media of claim 46 wherein in the method the extraction expression generated for one or more of the Web clippings includes redundancy to insure that when the Web view is replayed the one or more information elements extracted from the retrieved one Web page associated with the one Web clipping are the actual user-selected information elements.
- 54. The media of claim 53 wherein in the method the redundancy comprises at least one string associated with one or more information elements

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extracted from the retrieved one Web page associated with the one Web
clipping.
55. A computer readable media tangibly embodying a program of
instructions executable by a computer to perform a method for displaying a
personal Web view, the method comprising:
accessing a specification of the personal Web view, the Web view
comprising a plurality of Web clippings, each Web clipping containing information
from an associated one of a corresponding plurality of Web pages that have
been individually selected by a user from essentially any accessible Web page
on any Web server, the specification of the personal Web view containing a
specification for each of the plurality of Web clippings;
automatically retrieving the Web page associated with each Web clipping
in accordance with an access script for retrieving that Web page that is
associated with the specification of the Web clipping;
extracting one or more user-selected information elements from each
Web page in accordance with an extraction expression in the specification of
each associated Web clipping to create a displayable Web clipping containing
those elements, the extraction expression associated with each Web clipping
indicating the one or more user-selected information elements on the associated
Web page to be included in the Web clipping; and
combining and displaying in a browser the plurality of Web
clippings containing the extracted information elements from the plurality of
associated retrieved Web pages.
56. The media of claim 55 wherein in the method the access script for at

least one of the Web pages directly retrieves the Web page through a specified



- 58. The media of claim 55 wherein in the method the access script for at least one of the Web pages directly retrieves the Web page through a specified smart bookmark.
- 59. The media of claim 55 wherein in the method the information in the plurality of Web clippings is displayed in the browser in accordance with a layout specified in the specification of the Web view.
- 60. The media of claim 55 wherein in the method the extraction expression in one or more of the Web clippings comprises a DOM address of one or more user-selected information elements extracted from the one Web page associated with the one Web clipping.
- 61. The media of claim 55 wherein in the method the extraction expression in one or more of the Web clippings comprises an XPATH expression of one or more user-selected information elements extracted from the one Web page associated with the one Web clipping.
- 62. The media of claim 55 wherein in the method the extraction expression in one or more of the Web dippings includes redundancy to insure that when the Web view is displayed the one or more information elements extracted from the retrieved one Web page are the actual user-selected information elements.
- 63. The media of claim 62 wherein in the method the redundancy comprises at least one string associated with one or more information elements to be extracted from the retrieved one Web page associated with the one Web clipping.
 - 64. A method comprising:





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automatically	retrieving a plurality of predetermined Web pages that have
1	by a user from essentially any accessible Web page on any
Web server;	

automatically extracting user-pre-selected information content from the plurality of Web pages, and

displaying the user-pre-selected information content from the plurality of Web pages together as a personal Web view in a browser.

- 65. The method of claim 64 wherein at least one of the Web pages is directly retrieved through a specified URL.
- 66. The method of claim 64 wherein at least one of the Web pages is retrieved through a specified site description.
- 67. The method of claim 64 wherein at least one of the Web pages is retrieved through a specified smart bookmark.
- 68. The method of claim 64 wherein the information content from the plurality of Web pages is displayed in a prowser in accordance with a specified layout.
- 69. The method of claim 64 wherein the extracted user-pre-selected information content is extracted using DOM addresses of the information content on its associated Web pages.
- 70. The method of claim 64 wherein the extracted user-pre-selected information content is extracted using XPATH expressions of the information content on its associated Web pages.
- 71. The method of claim 64 further comprising after extracting content from a Web page, comparing a predetermined portion of that extracted information with an expected information content for that portion for insuring that the extracted information content is the actual pre-selected information content.

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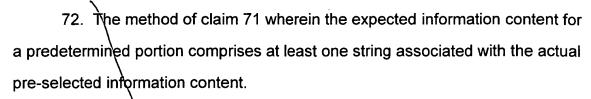
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73. A method of creating a personal Web view comprising:

for each of a\plurality of Web pages, generating an access script to automatically retrieve\the Web page, each of said Web pages being selected by a user from essentially any Web page on any Web server;

incorporating the access script for each of said Web pages and an expression for extracting user-selected information content from each of said Web pages into a specification of the personal Web view, the personal Web view containing information from each of said plurality of Web pages; and

storing the specification of the Web view, wherein when the stored Web view specification is replayed and active, said plurality of Web pages are automatically retrieved and the user-selected information content from each of said Web pages is extracted and combined for display in a browser.

- 74. The method of claim 73 wherein at least one of said Web pages is directly retrievable through a specified URL\which is incorporated into the access script to retrieve that Web page.
- 75. The method of claim 73 wherein at least one of said Web pages is retrievable through a specified site description which is incorporated into the access to retrieve that Web page.
- 76. The method of claim 73 wherein at least one of the Web pages is retrievable through a specified smart bookmark which is incorporated into the access script to retrieve that Web page.
- 77. The method of claim 73 wherein a layout of the information content from said plurality of Web pages is incorporated into the specification of the Web view.



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- 78. The method of claim 73 wherein the expression for extraction associated with each of said Web pages comprises one or more DOM addresses associated with the selected information content on said Web page.
- 79. The method of claim 73 wherein the expression for extraction associated with each of said Web pages comprises one or more XPATH expressions associated with the information content on said Web page.
- 80. The method of plaim 73 wherein the expression for extraction associated with at least dipe of said Web pages includes redundancy to insure that when the Web view is replayed the information content extracted from said one Web page is the actual\user-selected information content.
- 81. The method of claim 80 wherein the redundancy comprises at least one string associated with the information content extracted from said one Web page.

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